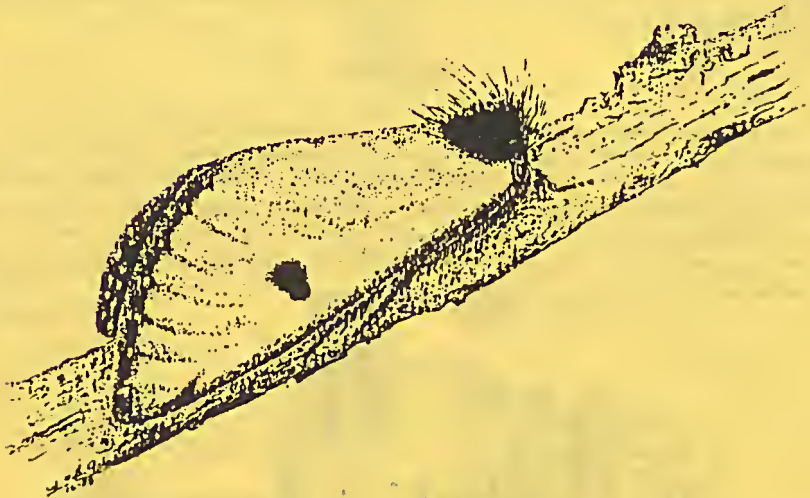


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News Bulletin of
The Entomological
Society of Victoria

THE ENTOMOLOGICAL SOCIETY OF VICTORIA (Inc) MEMBERSHIP

Any person with an interest in entomology shall be eligible for Ordinary membership. Members of the Society include professional, amateur and student entomologists, all of whom receive the Society's News Bulletin, the Victorian Entomologist.

OBJECTIVES

The aims of the Society are:

- (a) to stimulate the scientific study and discussion of all aspects of entomology,
- (b) to gather, disseminate and record knowledge of all identifiable Australian insect species,
- (c) to compile a comprehensive list of all Victorian insect species,
- (d) to bring together in a congenial but scientific atmosphere all persons interested in entomology.

MEETINGS

The Society's meetings are held at Clinies Ross House, National Science Centre, 191 Royal Parade, Parkville, Victoria, at 8 p.m. on the third Friday of even months, with the possible exception of the December meeting which may be held earlier. Lectures by guest speakers or members are a feature of many meetings at which there is ample opportunity for informal discussion between members with similar interests. Forums are also conducted by members on their own particular interest so that others may participate in discussions.

SUBSCRIPTIONS

Ordinary Member	\$14.00
Country Member	\$10.00 (100km + from GPO)
Student Member	\$ 7.00
Associate Member	\$ 4.00 (No Magazine)

No additional fee is payable for overseas posting by surface mail of the news bulletin. Associate Members, resident at the same address as, and being immediate relatives of an ordinary Member, do not automatically receive the Society's publications but in all other respects rank as ordinary Members.

Cover illustration by W.N.B. Quick, 1988

Marane melanospila (Wallengra.) (Lepidoptera: Thaumetopoeidae) ranges from the Atherton Tableland northern Queensland to Victoria and Tasmania. The larvae feed on *Eucalyptus*, *Leptospermum*, and *Kunzea*.

MINUTES OF ANNUAL GENERAL MEETING, 15 JUNE 1990

The President, M. Hunting, welcomed members to the meeting, commencing at 8.05 pm.

Apologies: K. Dunn

Present: G.J. Burns, P. Carwardine, K. Clark, D. Crosby, I. Faithfull, R & J. Field, D. & J. Holmes, P. Kelly, M. Malipatil, T. New, J. Ross, R. Vargi, K. Walker.

Minutes of the 1989 Annual General Meeting (*Vic. Ent.* 19: 56) were passed (Walker/R. Field).

The retiring President then thanked members for their support during the year and invited the Public Officer, D. Crosby, to conduct elections for office bearers. The following were elected after formal nomination.

President:	M. Hunting
Vice-President:	R. Field, P. Kelly
Secretary:	T. New
Treasurer:	G. Burns
Editor:	K. Dunn
Council:	J. Burns, P. Carwardine, D. Crosby, I. Faithfull, M. Malipatil, J. Ross, B. Vardy.

Past-President (ex officio): K. Walker

M. Hunting then delivered his Presidential Address on 'Care of Collections' and, after considerable discussion, he was thanked by D. Holmes.

Correspondence: Detailed and received (Kelly/Walker)

Treasurer's Report: G. Burns reported credit balances of \$2262.76 (General Account), \$1923.06 (Le Souef Memorial Account) and \$453.74 (Junior Encouragement Fund). There are 63 financial members. He moved that the Statement of receipts and payments for the year ended 31 December 1989, together with the statement of assets and the statement of receipts and payments for the year ended 31 December 1989 for the J.C. Le Souef Memorial Fund and the Junior Encouragement Fund as tabled and circulated to all members be received and adopted. Seconded by K. Walker: adopted.

Editor's Report: K. Walker thanked people for sending articles, and M. Malipatil (for K. Dunn) expressed the hope that this would continue. M. Hunting, from the Chair, expressed the Society's thanks to K. Walker for producing the last two issues of the News Bulletin.

Excursions: P. Carwardine outlined arrangements for future excursions. A visit proposed to view D. Holmes' collection on 25 August, at 11 am.

General Business:

- (a) The Secretary reported progress on the disbursement of the Junior Encouragement Fund, and invited further comments.
- (b) G. Burns - reported sources of plastozone in Melbourne and showed samples.
- (c) D. Crosby - the two specimens of the Palm Dart skipper recently collected in Melbourne. Several members commented on possible occurrences and distribution of this species.
- (d) D. Holmes - metal label holders available - see elsewhere in this issue.
- (e) D. Crosby - a booklet on the Purple Emperor butterfly, produced by the British Butterfly Conservation Society.
- (f) K. Walker - drew member's attention to the fact that T. New was nearing the end of his term as President of the Australian Entomological Society, and thanked him for his efforts.
- (g) P. Carwardine - commented on supply of ethyl acetate and dropper bottles.

The meeting closed at 9.45.

MINUTES OF COUNCIL MEETING 20 JULY 1990

The President, M. Hunting, opened the meeting at 8.10 pm.

Apologies: T. New

Present: J. & G. Burns, P. Carwardine, D. Crosby, K. Dunn, I. Faithfull, R. Field, P. Kelly, M. Malipatil, J. Ross, K. Walker

Minutes: of the May Council Meeting (*Vic. Ent.* 20: 37-39) were passed (Walker/Crosby)

Correspondence: Nil

Treasurer's Report: G. Burns reported credit balance of \$2375.39 (general account), \$1829.31 (Le Souel Memorial Account) and \$453.74 (junior encouragement fund).

There are at present 85 financial members

Received (Crosby/Field)

Resolved (G. Burns/Faithfull) that the Editor be given a fund of \$100.00 as petty cash for postage etc. Carried.

Excursion Report: P. Carwardine reported briefly on the excursion to the Zoo. Dates for two future excursions were given, 25 August to D. Homes, Dramana and 11 November to Heathcote.

Editor's Report: K. Dunn reported that the front cover had been improved and that articles were in hand for the next edition but more were needed for future editions.

General Business:

- (i) D. Crosby reported that a meeting of the Entrees sub-committee would meet in about one month and it was possible that the new edition of the distribution maps for Victorian butterflies could be produced in about one year.
- (ii) Programs for coming General Meetings will be: 19 October - P. Kelly to speak on Parapsines, 24 December - Members' Night.
- (iii) Junior Encouragement Fund: Considerable discussion took place. Resolved (Field/J. Burns) that the target schools should be those High Schools running Agriculture or Horticulture courses which should have an Entomology component. Carried, Resolved (J. Burns/Crosby) that the funds available should be used in the following way...

Promotion	\$100.00
First Prize	\$150.00
Second Prize	\$100.00
Third Prize	\$ 50.00
Subscriptions	\$ 50.00

(Prizes to maximum limit of the above values)

Resolved (Crosby/Walker) that the competition should be advertised in February 1991 and entries should close 30 June 1991. Carried.

Resolved (Kelly/Walker) that a suitable flier with a covering letter should be sent to the target schools but not a poster. Carried.

K. Walker will mock up a suitable flier and R. Field will obtain a list of target schools and obtain an idea of a suitable length for essays for this type of student.

- (iv) Discussion took place regarding a change of cover illustration for the Victorian Entomologist. Resolved (Crosby/Dunn) that a dragonfly would be suitable for 1991 but that thereafter the illustration should reflect the interest of the current president. Carried.

The meeting closed at 9.40 pm.

ENTOMOLOGICAL SOCIETY OF VICTORIA

J.C. ('ZOO') LE SOUËF MEMORIAL AWARD

The Society invites nominations for the Award, which is made annually for contributions to entomology by an amateur in Australia. Nominations may be made by any individual or body, and should contain sufficient information for the Awards Committee to be able to appraise the contribution made by the nominee. It is not expected that they be excessively lengthy, but documentation (such as publications, if any) on loan would be appreciated. Nominations remain current for three years, and should reach the Society's Secretary (Dr T.R. New, Department of Zoology, La Trobe University, Bundoora, Vic 3083) by 1 November 1990.

EXCURSION NOTICE

Excursion to view *David Holmes' Collection*

DATE: Saturday 25th August
TIME: 11 AM onwards
PLACE: 5 Overbay Road Dromana (MELWAY 159 J9)

An opportunity to peruse this magnificent collection of both Australian and exotic insects should *not* be missed. Some of the world's most attractive butterflies and moths will be on display. Unfortunately the collection may be subject to division at a future date and this may be your last chance to see the collection in its complete form. *Don't miss out!*

Please bring a picnic lunch and make a day of it.

Insect collecting time will soon be here again!

On the 11th November the excursion to Heathcote - Greytown - Nagambie area in central Victoria. This should be a rewarding day in the field and it is hoped that it will be well attended. Details on this excursion are to be finalised and will be advised in the October edition.

Peter Carwardine
Excursion Secretary

EPICOMA MELANOSPILA - The Black Spot Moth

Pat and Mike Coupar, 143 Brackenbury Street, Warrandyte, Vic. 3113.

The moth featured on the front cover of the *Victorian Entomologist* is *Epicoma melanospila* (Notodontidae), the Black Spot Moth. The illustration is of the male and was by Nigel Quick.

Epicoma melanospila is an attractive and common moth of eastern Australia. It flies at night during the warmer months of the year and both sexes are attracted to outside lights. It is a stout, hairy-bodied moth with a wingspan of about 45mm, males are slightly smaller than females. The forewings of both sexes are silvery-white with a narrow dark brown border and a black spot near the centre of each wing. In the male there is also a black line that runs across the wing below the black spot. The hindwings of both sexes are greyish-brown and pale orange. At rest the wings are held roof-wise over the body. Both have a tuft of hair on the thorax, while the females have a distinctive tuft of orange hair at the end of their large abdomen.

In their own way the mature larvae are just as attractive as the adults. When fully grown they are about 35-45mm in length and are grey with orange marks along both sides of the body and orange legs. The body is covered with short, dark tufts of hair which may cause some skin irritation when handled, although we have not experienced this reaction ourselves. The larvae are gregarious and follow each other head to tail when travelling over their foodplant and for this reason they are called "processionary caterpillars". They feed at night and usually rest during the day either on foliage or at the base of the foodplant. On several occasions we have found groups of over 30 larvae resting motionless on the foliage or the trunk of a juvenile Eucalyptus tree. The larvae have large head capsules but their vision is poor and they have a habit of moving their head from side to side to enable them to stay in touch. However it is probably a case of "the blind leading the blind".

There is no doubt that there is safety in numbers. Several times we have found a solitary *E. melanospila* larva and in most cases it has turned out to be parasitised either by a Braconid wasp or a Tachmid fly. One time, in our garden in Warrandyte we observed a green flower spider amongst a group of almost fully grown larvae. It had killed one larvae, which was nearly twice the size of the spiders, and was carrying it away head down bound by a tough silken thread.

We have collected larvae of *E. melanospila* from several suburban localities of Melbourne including The 100 Acres in Park Orchards, Antonio Park in Ringwood, The Warrandyte State Park and our garden in Warrandyte. We have found them on *Eucalyptus gonicalyx*, *E. macrorhyncha*, *E. ovata*, *E. obliqua*, and *E. radiata*. One group of 17 larvae was collected at Antonio Park on *E. macrorhyncha* on 1 April 1987, they were set up in a small fly-wire covered bucket containing the food plant which was kept fresh in a small container of water. Using this method it was only necessary to change the foliage about every seven days. A month later nine of the larvae had successfully pupated while the others had either died or escaped. Pupation occurred within a woven cocoon at the base of the container under absorbent paper.

In the bush larvae would pupate in the soil, leaf litter or perhaps under bark. We transferred the pupae to another container to over-winter. Adults emerged from all nine pupae, the first in early November, the last in the middle of December and the females outnumbered males 7 to 2.

The life history of *E. melanospila* is most interesting to observe, particularly the larval stage which raises some fascinating questions. Why do they show such strong processionary tendencies from the time they emerge through to pupation, when some other closely related species do not? The larvae does not seem to have a preference for any particular species of *Eucalyptus*, an adaptation which may help to make it a successful and common moth of temperate Australia. It is nevertheless one of our most attractive moths.

Editors note: *Marane melanospila* (Wallengr.) (Noctuoidea : Thaumetopaeidae) is now the accepted name for this moth. The epithet *melanospila* was referred to *Marane* Walker on account of the forewing venation. Ref: *Moths of Australia* I.F.B. Common (1990).

A MOMENT FOR REFLECTION

An excerpt from the proceedings of the general meeting of the Royal Entomological Society held on 6 March 1946, in the *Proceedings of the Royal Entomological Society of London, Series C, Journal of Meetings* 11(3): 12 (1946).

"The following extract from a letter from Dr. Stanislaw Adamczewski of the Polish Museum of Zoology was read:-

Since the out break of the war in 1939, during all those long years, we lived here in Poland threatened by death at any moment. During five years I suffered lack of food and fuel. I had to suffer humiliations and hardships to be able to protect my country and my scientific institution, i.e. the Polish Museum of Zoology, in particular the Lepidopterological Department. But all my efforts were in vain. My friends and collaborators, Dr. J. Kremky and Eng. M. Maslowski, died prematurely under German occupation. To our Laboratory which was saved from all war shocks during the five years the Germans set fire deliberately on 2nd November, 1944. On that day all the lepidopterological library of 3000 volumes and all the systematic collection of lepidopteron insects (about 500,000 specimens) were burned..."

THE PALE FORM OF THE ORCHARD BUTTERFLY IN NORTHERN QUEENSLAND.

Kelwyn L. Dunn
Plam Research Institute, Swan St., Burnley Victoria 3121

Introduction

The distinctive pale female form of the orchard butterfly, *Papilio (Princeps) aegeus* Donovan, was originally described by Waterhouse (1908) as *Papilio beatrix*, but has since been shown to be a color morph of *P. aegeus* and is usually known as form *beatrix*. On the Australian mainland the *beatrix* form of the nominate subspecies *aegeus* appears to be extremely rare and is not regularly encountered. During this century, a few specimens have been taken from localities on Cape York Peninsula, and one specimen at Herbert River near Ingham. McCubhin (1971) however, reported the pale form to be "reasonably common" on Prince of Wales and Banks (Moa) islands in Torres Strait. On Murray Island where the Papua New Guinean subspecies *ormenus* Guérin-Meneville is present, pale form females are in the majority (Wood 1987). The *beatrix* form of the nominate *aegeus* is proposed to be a derivative of Torresian influence rather than purely mainland ancestral origin.

Simple Mendelian Inheritance

Recently Graham Wood of Atherton, Queensland reared progeny from a mated female of the form *beatrix* collected at Iron Range, Cape York Peninsula. He found the ratio of *beatrix* : normal of the subsequent offspring to be about 2:1 in both the first and second generations (Wood 1987). This data, including evidence that Murray Island normal form females of subspecies *ormenus* breed true (Wood 1987) as do the normal mainland nominate females, firmly suggests that form *beatrix* is controlled by simple Mendelian dominance / recessive segregation; the normal female form being recessive to the form *beatrix*. The females used by Wood in both generations were phenotypically *beatrix*, but presumably were genotypically heterozygous rather than homozygous for *beatrix* to produce the published ratio. This is detailed below for greater clarity.

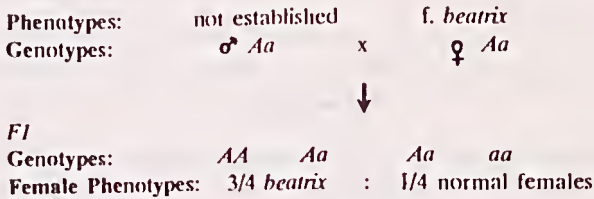
The following proposal can be shown to approximate the reported outcomes:

let "A" = gene for *beatrix* female
let "a" = gene for normal form female

Gene "A" is dominant over gene "a", and a genotype with an "A" will result in the phenotype *beatrix*.

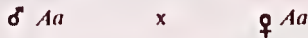
The wild mated female used by Wood (1987) in his breeding experiment is assumed to be heterozygous with a genotype of either "Aa" or "aA", phenotypically *beatrix*.

The unknown male mate would need also to be heterozygous rather than homozygous, presumably expressing the *beatrix* male characters. These male phenotype characters discussed later in this paper are still unconfirmed.



(assuming an equal ratio males : females in progeny)

chance mating: (same as above - both heterozygous)



F2 - genotypes and female phenotypes as per *F1*

The *F2* progeny and future generations will have the same genetic and phenotypic outcome as the *F1* (assuming heterozygous matings) thus agreeing reasonably well with Wood's (1987) results stated as being about 2/3 *beatrix* to 1/3 normal female in the succeeding generations. Although the proportion was a little lower than the theoretical Mendelian segregation, the ratios can be distorted by a low number of offspring, the details of which were not recorded in Wood (1987) and/or losses through fatalities eg. infertility or other unknown influences. Alternative matings would be expected to produce theoretical phenotype ratios of 50:50, or all *beatrix* in the first generation, depending on the parental genotypes selected. A population where random matings occur would presumably average about 70 percent *beatrix* per generation assuming no losses, or selection pressures in either direction; remarkably close to Wood's "subsequent" generation ratio of 66:33, especially if his results involved several trials and the data was pooled per generation.

Discussion

These results firmly suggest *beatrix* is the dominant genetic form and would thus be expected to be represented in the majority of females, agreeing with Wood's and McCubbin's observations in Torres Strait where *beatrix* genes are well established in the gene pool. The factors preventing its dominance on Cape York Peninsula are not known. Strong selection pressure is presumably operating against the pale dominant form, or possibly this form in the nominate subspecies is a derivative of very recent

Papua New Guinean and/or Torres Strait invasion(s). The geographic barriers still serve as an effective barrier to this color morph; the occasional vagrant's progeny being selected against and quickly eliminated from the nominate *aegaeus* gene pool.

Further Observations

Progeny from Wood's original female has been supplied to various butterfly houses in Australia including the Melbourne Zoo. In Melbourne they were initially reared separately to build up numbers and were then released to pair at random in the flight cage. After several generations of mixing with the pure normal form stock, the proportion of *beatrix* was thought by the Zoo curators to be about 25 percent of females reared (1989). This does not agree with the expected ratio, and there is reason to doubt the stated figure as the curators had not carried out any counts. My count (in August 1989) of about 20 female adults in the flight cage revealed about 50 percent *beatrix* including two unusual specimens. These two females (representing 10 percent of the sample) possessed some unique characters such as a uniformly pale grey rather than whitish forewing upperside and pale grey hindwing, but otherwise showed close proximity to *beatrix*, particularly with regard to the buff abdomen. Apart from these variations, the *beatrix* adults appeared markedly constant in appearance, although this may be expected from a single parent stock. It is surmised that the *beatrix* form in Australia may be a little variable, but perhaps not to the extent suggested by Common and Waterhouse (1981); these variations perhaps being carried on linked genes. In the light of the simple mendelian segregation proposed, it seems unlikely that the two unique females mentioned could be intermediate forms and may perhaps be the result of a genetic drift associated with a small gene pool, as is presumably the diminished adult size and some wing deformations present in a high proportion of the Zoo's *P.aegaeus* progeny. The other female morph described and named form *tulkia* by Waterhouse (1932) from Banks (Moa) Island, Torres Strait has not been noted amongst the *beatrix* progeny and is presumably of a separate genetic origin to *beatrix*. No other specimens of this form are known (Common and Waterhouse 1981).

Beatrix Characters in Males

McCubbin (1971) stated that *beatrix* did not appear to have a corresponding male. A number of males in the Melbourne Zoo population examined appeared to have much reduced red spotting on the hindwing underside. This is a character normally associated with *P.aegaeus ormenus* Guerin-Meneville, which occurs in Torres Strait and only very rarely encountered among Cape York Peninsula males. Common and Waterhouse (1981) mentioned a male from Banaga which resembled *ormenus* rather than the subspecies *aegaeus*. There is a male in the Museum of Victoria (MV) from Somerset Cape York which is more similar to *ormenus* and also female from the same locality which appears to be intermediate and presumably of hybrid origin, possessing only a partial white bar on the hindwing beneath. According to Waterhouse (1932), and Common and Waterhouse (1981) the presence of this white bar joining the central patch to the costa is unique to the mainland subspecies *aegaeus*, being absent in the

subspecies *ormenus*. Some intermixing of these subspecies appears to occur however, as there is a female from Banks Island (MV) with a white bar and two females (form *beatrice*) from Prince of Wales Island (MV) which also possess this nominate subspecific character. Apart from these exceptional adults, both sexes of the two subspecies are normally consistent and readily distinguishable, and withstanding the occasional vagrants the two subspecies are geographically isolated.

Among populations recognised as subspecies *ormenus*, the female pale form *beatrice* is common (Common and Waterhouse 1981). I link the presence of the *ormenus*-like characters among some males in the Zoo population with the introduction of the *beatrice* females. These males are similar to some Torres Strait island specimens in the Museum of Victoria except the white band on the forewing is not reduced, and the adult butterflies are smaller. These characters of Torresian appearance may be the expression of the *beatrice* gene in the male, or merely suggest the ancestral origin of that original *beatrice* female collected at Iron Range. No Melbourne zoo stock was derived from Torres Strait and males from Cape York Peninsula are not normally *ormenus* like; Cape York males being usually indistinguishable from males from southern Queensland. Occasional vagrant specimens obviously do reach Cape York Peninsula and the hybrid offspring of such vagrants may be responsible for the spasmodic appearance of a pale female form of the nominate subspecies *aegeus* on Cape York Peninsula.

Thus, interbreeding with the nominate *aegeus* presumably swamps the Torresian female subspecific (*ormenus*) elements and results in a pale form female bearing the characters of the female of the nominate subspecies *aegeus*, viz possessing the extension of the white central area beneath. This gives the seemingly false impression that *beatrice* is an established, but very rare mainland Australian morph, as assumed by Waterhouse (1908), rather than the progeny of earlier and still recurring Torresian vagrancies. Hybridisation, subsequently modifying their ancestral *ormenus* hallmarks. The Iron Range female's ancestors are therefore surmised to have originated only a few generations earlier from beyond Australia.

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RANGE EXTENSIONS AND THE BIOLOGY OF SOME WESTERN AUSTRALIAN BUTTERFLIES

by

Ross P. Field

Keith Turnbull Research Institute,
Department of Conservation and Environment,
P.O. Box 48 Frankston, Vic. 3199.

Following 4 weeks of travel through the Northern Territory in the spring of 1989 (Field 1990), my family and I crossed, in late October, into Western Australia, near Kununurra. During the next 9 weeks we travelled west along the southern edge of the Kimberley Ranges and then south down the coast, with a detour via the Hamersley Range, to Perth, east to Kalgoorlie, south to Esperance and the National Parks at Cape Le Grand and Cape Arid and then into South Australia via the Nullarbor. Forty-five species of butterflies were recorded in this period, a number from new locations. Two species, *Theclinesthes miskini miskini* (T.P. Lucas) and *Theclinesthes albocincta* (Waterhouse), were also collected at Coffin Bay in South Australia and are included in the list below. Notable observations included the following:

Danaus genutia alexis (Waterhouse and Lyell): common in an open shady area near the diversion dam at Kununurra. Despite an extensive search of the area, no evidence of the life history could be found. David Holmes recorded this species from the same location in 1987.

Geitoneura klugii klugii (Guerin-Meneville): common on Meanarra Hill, Kalbarri National Park. Common and Waterhouse (1981) record this species north to Northampton, 70 km south of Kalbarri.

Hypochrypsops ignitus olliffi Miskin: one newly emerged female was collected on the granite headland at Dolphin Cove in the Cape Arid National Park. Most specimens of this subspecies have been collected along the southwest coast at Esperance and near Albany and Denmark. Dolphin Cove is 110 km east of Esperance.

Ogyris idmo idmo Hewitson: this rare species was collected from three sites: near Mundaring and near North Bannister, both locations within 50 km of

Perth, and at Mt Ragged in Cape Arid National Park, 150 km east of Esperance. At all sites several specimens were observed. The females were active in the morning, flying short distances when disturbed to resettle on the ground, often near a nest of sugar ants (*Camponotus* sp.). The males were active in the afternoon, flying fast 2 to 4 metres above the ground, usually along consistent flight paths often leading to open areas where two or more males would pursue each other high into the air. At Mt Ragged a female was collected and several males were seen flying fast across the track leading into the camping area. Females from this location have brighter bluish basal areas above than do *idmo* from near Perth. The only other specimens from Mt Ragged are a pair in the Australian National Insect Collection (ANIC) collected on 16 October 1982 by a CSIRO expedition.

Ogyris sp. (Kalgoorlie): this species is closely allied to *Ogyris idmo* and had been found to be common at Lake Douglas during a visit to the area in early October 1987 (Field 1987). The species was also abundant in mid December 1989 with both males and females flying in the morning and settling frequently on the ground and low shrubs. In the afternoon, any adult that was flushed from the ground usually landed high in a nearby eucalypt where it would remain unless shaken from the tree. During the early morning (9 am) several females were observed walking around the entrance to *Camponotus* nests rubbing their wings in a manner exhibited by many lycaenids when they are about to oviposit. On the bark of a eucalypt, forming one side of the entrance to a *Camponotus* nest, was found a batch of 17 eggs of this *Ogyris*. These eggs were compared to the three *idmo* eggs in the ANIC (collected by Bob Hay from a papered, dying female near Perth in 1987) and are different enough to add weight to the suggestion that this Kalgoorlie population is a separate species of *Ogyris*. Unfortunately 13 of the eggs were parasitised by an encyrtid (*Ooencyrtus* sp.) and the remaining 4 failed to hatch.

Ogyris otaues C. and R. Felder: as in late September 1987 (Field 1987), this species was common as adults and larvae (all instars) in late November 1989. At night, larvae, with *Camponotus* ants in close attendance, could be readily located with a torch feeding near the tops of the *Leptomeria* bushes. On one bush of about 1.25 metres in height, 20 larvae were counted, and on a small bush less than half a metre high and with few

branches, 8 larvae were recorded. Adults reared from these larvae all emerged early in the morning (soon after sunrise) and if given the opportunity would climb up 2 meters before expanding their wings.

Ogyris zosine typhon Waterhouse and Lyell: apparently common in the early spring at Fitzroy Crossing as pupal skins were found in late October in many *Camponotus* nests at the base mistletoe bearing eucalypts lining the Fitzroy River. As found in the Northern Territory (Field 1990), there were many *Apanteles* cocoons attached to the base of the trunks of the trees indicating considerable larval mortality from this parasitoid. One mature larva collected at Fitzroy Crossing produced a male on the 22 November. Another colony of this species was found 110 km south (by road) of Broome. Again *Apanteles* were prevalent but one larva produced a female on 20 November. These records, and that of Hugh Bollam's (personal communication) from Lake Argyle, suggest that *O. zosine* probably occurs right across the top of Australia wherever the habitat is suitable.

Ogyris oroetes apiculata Quick: common along with *O. amaryllis parsonsi* at Dales Gorge in Hamersley National Park in early November. Males have a narrow black outer margin to the wings, including a narrow black apex to the forewing, unlike specimens from the Stirling Ranges which have a much broader black apex.

Jalmenus inous Hewitson: this variable species is common, but local, on *Acacia cyanophylla* growing on the coastal sand dunes between Perth and Bunbury. There is one specimen from "Esperance" in the ANIC collected by "Zoo" LeSouef which possibly represents the most easterly distribution of the species. A small colony of this butterfly was found at Cape Le Grand Beach (Cape Le Grand National Park), 30 km south-east of Esperance. All specimens from this location had no white margins to the brown bands, making the markings beneath obscure.

Candalides cyprotus cyprotus (Olliff): recorded by Common and Waterhouse (1981) as occurring as far north "as a little beyond Geraldton". This species was common in the Kalbarri National Park, on Meanarra Hill, 140 km north of Geraldton.

Theclinessthes hesperia hesperia Sibatani and Grund: common on the *Adriana* growing on the sand dunes north of Mandurah. Pupae were located on the underside of branches resting on the sand and larvae were attended by the same species of ant attending *J. inous* on neighbouring plants.

Theclinessthes hesperia littoralis Sibatani and Grund: common at Esperance and at Cape Le Grand Beach, 30 km south-east of Esperance. Three species of ants were observed attending the larvae feeding on *Adriana* flowers.

SPECIES COLLECTED AND REARED IN WESTERN AUSTRALIA AND SOUTH AUSTRALIA, OCT 1989 - JAN 1990

SPECIES	LOCATION	DATE COLLECTED/ ADULT EMERGENCE
HESPERIIDAE		
<i>Anisyntoides argenteoornatus insula</i> (Waterhouse)	Rottneest Is.	30 Nov
<i>Hesperilla donnysa albina</i> Waterhouse	Nth Bannister	28 Nov
<i>Motasingha dirphia</i> (Hewitson)	Nth Bannister	28 Nov
	Mundaring	29 Nov
<i>M. trimaculata occidentalis</i>	Nth Bannister	28 Nov
Moulds and Atkins	Bunbury	6 Dec
<i>Antipodia atralba anaces</i> (Waterhouse)	Nth Bannister	28 Nov
<i>Mesodina halyzia cyanophracta</i> Lower	Nth Bannister	28 Nov
<i>Taractrocera papyria agraulia</i> (Hewitson)	Nth Bannister	28 Nov
<i>Ocybadistes flavovittatus vesta</i> (Waterhouse)	Lake Argyle	25 Oct
PAPILIONIDAE		
<i>Papilio canopus canopus</i> Westwood	Broome	17-25 Dec
PIERIDAE		
<i>Catopsilia pomona pomona</i> (Fabricius)	Lake Argyle	25 Oct
<i>Eurema herla</i> (W.S. Macleay)	Lake Argyle	25 Oct
<i>Elodina padusa</i> (Hewitson)	Hamersley N.P.	3 Nov
	Tom Price	3 Nov
<i>Delias aganippe</i> (Donovan)	Kalbarri (5 km E)	18 Nov
NYMPHALIDAE		
<i>Danaus genutia alexis</i> (Waterhouse and Lyell)	Kununurra	26 Oct

SPECIES	LOCATION	DATE COLLECTED/ ADULT EMERGENCE
<i>D. chrysippus petilia</i> (Stoll)	Kununurra	25 Oct
<i>Euploea core corinna</i> (W.S. Macleay)	Kununurra	25 Oct
<i>Hypocysta adiante antirius</i> Butler	Lake Argyle	25 Oct
	Kununurra	26 Oct
<i>Geitoneura klugii klugii</i> (Guerin-Meneville)	Kalbarri (5 km E)	16-18 Nov
	Nth. Bannister	28 Nov
	Bunbury	6 Dec
<i>G. k. insula</i> Burns	Rottnest Is.	30 Nov
<i>Heteronympha merope salazar</i> Fruhstorfer	Mundaring	29 Nov
	Manning	29 Nov
	Bunbury	6 Dec
<i>Hypolimnas bolina nerina</i> (Fabricius)	Windjana Gorge	30 Oct
<i>Vanessa itea</i> (Fabricius)	Rottnest Is.	30 Nov
<i>Junonia orithya albicincta</i> Butler	Lake Argyle	25 Oct
<i>J. villida calybe</i> (Godart)	Leeman	26 Nov
<i>Acraea andromacha andromacha</i> (Fabricius)	Wyndham	26 Oct
LYCAENIDAE		
<i>Hypochrysops halyaetus</i> Hewitson	Leeman	26 Nov
<i>H. ignitus olliffi</i> Miskin	Cape Arid N.P.	17 Dec
<i>Ogyris amaryllis meridionalis</i> Bethune-Baker	Turquoise Bay, Exmouth	8 Nov
	Kalbarri	24 Nov
<i>O. a. parsonsi</i> Angel	Lake Argyle	25 Oct
	Hamersley N.P.	3 Nov
	Tom Price	3 Nov
<i>O. idmo idmo</i> Hewitson	Nth Bannister	28 Nov
	Mundaring	29 Nov
	Cape Arid N.P.	18 Dec
<i>Ogyris</i> sp.	Lake Douglas, Kalgoorlie	9-12 Dec
<i>O. otanes</i> C. and R. Felder (?)	Leeman	25 Nov
		-26 Dec
<i>O. zosine typhon</i> Waterhouse and Lyell	Fitzroy Crossing	22 Nov
	Broome (110 km S)	20 Nov
<i>O. oroetes apiculata</i> Quick	Hamersley N.P.	3 Nov
<i>Jalmenus inous</i> Hewitson	Mandurah (10 km N)	3-16 Dec
	Cape Le Grand N.P.	21 Dec-3 Jan

SPECIES	LOCATION	DATE COLLECTED/ ADULT EMERGENCE	
<i>J. icilius</i> Hewitson	Exmouth (24 km S)	6 Nov	
	Minilya R.H.	9 Nov	
	Mundaring Weir	20-22 Dec	
<i>Candalides cyprotus cyprotus</i> (Olliff)	Kalbarri (5 km E)	16-22 Nov	
	<i>C. acastus</i> (Cox)	Leeman	26 Nov
<i>C. hyacinthinus simplex</i> (Tepper)	Cape Arid N.P.	17 Dec	
	Cape Le Grand N.P.	21 Dec	
	Kalbarri	18-24 Nov	
<i>C. heathi heathi</i> (Cox)	Cape Arid N.P.	18 Dec	
	Mandurah (10 km N)	2-21 Dec	
<i>Prosotas dubiosa dubiosa</i> (Semper)	Yellowdine	9 Dec	
	Wyndham Gorge	26 Oct	
<i>Neolucia agricola occidens</i>	Nth Bannister	28 Nov	
	Waterhouse and Lyell	Mandurah (10 km N)	1 Dec
<i>Theclinesstes miskini miskini</i> (T.P. Lucas)	Kununurra	26 Oct	
	Hammersley N.P.	3 Nov	
	Tom Price	3 Nov	
	Turquoise Bay, Exmouth	5 Nov	
	Vlaming Lighthouse, Exmouth	5 Nov	
	Coral Bay	7 Nov	
	Kalbarri	16-24 Nov	
	Yellowdine	4 Dec	
	Cape Arid N.P.	17 Dec	
	Coffin Bay (Sth Australia)	29 Dec	
<i>Theclinesstes albocincta</i> (Waterhouse)	Vlaming Lighthouse, Exmouth	5 Nov	
	Coffin Bay (Sth Australia)	29 Dec	
<i>T. hesperia hesperia</i> Sibatani and Grund		- 19 Jan	
	Mandurah	1-19 Dec	
	<i>T. h. littoralis</i> Sibatani and Grund	Pink Lake, Esperance	13 Dec
		Cape Le Grand N.P.	21 Dec
			- 12 Jan
<i>Lampides boeticus</i> (Linnaeus)	Esperance	25 Dec	
		- 21 Jan	
	Kununurra	26 Oct	
<i>Zizeeria karsandra</i> (Moore)	Bunbury	6 Dec	
	Kununurra	25 Oct	

SPECIES	LOCATION	DATE COLLECTED/ ADULT EMERGENCE
<i>Euchrysops cnejus cnidus</i> Waterhouse and Lyell	Kununurra	26 Oct

Acknowledgements

I am grateful to the Department of Conservation and Land Management for permission to collect specimens from National Parks. I also wish to thank Bob Hay for his guidance and advice whilst in Perth, Dr Don Sands for identification of parasitoids and Ted Edwards for comments on *Ogyris* eggs.

References

- Common, I. F. B. and Waterhouse, D. F. (1981). *Butterflies of Australia*. Angus and Robertson. London, Sydney, Melbourne, Singapore, Manila. ISBN 0 207 14236 x. 682 pp.
- Field, R. P. (1987). Notes on butterflies collected in south-west Western Australia, September-October, 1987. *Vic. Ent.* 17(6):111-114.
- Field, R. P. (1990). New and extended distribution records of butterflies from the Northern Territory. *Vic. Ent.* 20(3):40-44.

NOTE: The editor has pointed out to me that a damaged male *Ogyris oroetes* Hewitson was collected by "Zoo" Le Souef from Daly River, NT, on 9 July 1971 (Dunn 1985, *Vic. Nat.* 103(3):94-98), this being the first record of the species from the "Top End" and not those I reported in the previous *Victorian Entomologist* (Vol. 20(3):40-44). Dunn reports this specimen to be similar in colour (purple) to those from near Alice Springs. This is not the case of the specimen collected from Pine Creek, 120 km east of Daly River, which above is shining pale lilac-blue and beneath the base colour is paler than those from near Alice Springs.

R. P. Field

BOOK REVIEW

MOTHS OF AUSTRALIA BY I.F.B. COMMON, Published by Melbourne University Press (May 1990), Recommended retail price \$125.00. 544pp, 32 pages of colour plates.

Lepidopterists in Australia have long been served with a sequence of excellent books on butterflies, culminating in the second edition of *Butterflies of Australia* in 1981. As a result, hobbyists have been able to identify their captures and to appraise their importance. In marked contrast, people wishing to study the vast bulk of our Lepidoptera, the moths, have long been frustrated at not being able to identify reliably more than a small proportion of their captures and often only from outdated papers with dubious nomenclatorial accuracy. Partially because of this, relatively few people have collected moths eagerly. Some information has, indeed, been available from a small book written by Ian Common and published by Jacaranda in two editions in the 1960s and, more recently, from McQuillan's *Common Moths of the Adelaide Region*. Common's chapter in the first edition of the *Insects of Australia*, although technical, has also been useful.

The long-awaited *Moths of Australia*, hailed by the publishers as 'the first comprehensive, reliable, well-illustrated book covering the enormous diversity of Australian moths' is indeed a landmark in the history of lepidopterology in Australia. The book is divided into two parts. The first, *Moths and their Environment*, occupies 84 pages and covers structure and life history, biology, population control, economic significance, evolution and family classification. The second, longer, part is a systematic treatment of the Australian fauna and is followed by Appendices on collection and study and larval food plant listings. 'References' occupies about 16 pages and there is also a glossary and comprehensive index. About a thousand species of moths are illustrated by photographs: Fig 16-50 are each black and white composite plates illustrating from 9-20 set moths each, and Fig 50-55 include living moths and selected early stages. There are also 32 brilliant colour plates: plates 1-22 show a wide selection of set moths, and 23-32 each show about 15 living moths and early stages. This wealth of illustration, together with more technical line drawings

used to help diagnose each family in the text, should enable many people to identify - at least to major groups, and often to species level - moths which they encounter.

The book can therefore be viewed as a combination of authoritative text on Australian moths and identification guide and many people will, I suspect, seek to use it primarily as the latter. Because of its long production interval, a number of important recent references could not be incorporated. However, the text pre-empts a number of name changes to be included in the forthcoming *Checklist of Australian Lepidoptera* so that some names will be unfamiliar to many readers. Several 'old friends' have disappeared: the emperor gum moth is *Opodiphthera* rather than *Antheraea*, the large hepialid familiar as *Tricleta argentata* is now *T. atripalpis*, and *Epicoma* (Notodontidae) is now *Marane* (Thaumatopoeidae), for examples. On the other hand, *Rhodogastria* (Arctiidae) stays, despite recent change by Watson in this group of arctiids.

It is inevitable that many people seeking to identify moths will turn initially to the plates - in many cases this will lead them to the correct taxon, and the species illustrated mostly receive direct comment in the text, often with significant biological information included. Equally inevitably, some ambiguities occur - only about 1 in 10 of described moths are illustrated, and many have yet to be named, and the book is not projected as a comprehensive or infallible identification guide. It should surely fulfill the author's hope of inducing people to take a deeper interest in moths, and guide them to much of the more specialist literature. As an authoritative general text it is admirable and one of very few such books which one can herald as an 'instant classic'. I missed the presence of keys, or even a tabular summary of major recognition features for superfamilies and major families. But, working with a series of 'randomly-selected' set moths and starting with the illustrations, most came out to the correct superfamily, and the information from the text generally allowed progression well beyond this level - often to species for larger moths in the better-documented families.

The book itself is beautifully produced, with an eye-catching dust jacket, and has been thoroughly proof-read. It lies open on the desk easily and without strain - an

invaluable feature for a book of this sort. At \$125 it is by no means over-priced, as the combination of authority and illustration will give it lasting value. This book is a fitting pinnacle to Ian Common's distinguished career.

T.R. New.

A REQUEST FOR INFORMATION:

I am currently compiling a review on foodplants of Lycaenids in Victoria. The information I need is:

- Larval host plant name
- the lycaenid species name and stage of life cycle discovered
- Presence of ants and name if determined
- Locality and date and contributor's name.

All contributions will be acknowledged.

Send your contributions to:

M.F. Braby
Zoology Dept.
James Cook University
TOWNSVILLE QLD 4811



ON THE GRAPEVINE



Michael Braby was in Melbourne briefly during July and visited a number of members including David Crosby, Nigel Quick and Kelyvn Dunn. Michael is presently enjoying the glorious winter climate of Townsville. It had been "too cold" according to Michael, in the Paluma Range for any serious collecting, but had been content with hunting for life histories of species of interest, and his research work on the reproductive ecology of the tropical bush brown butterflies.

Fabian Douglas of Rainbow was also in Melbourne for a short time to see Michael Braby. Fabian visited Kelyvn and Laurie Dunn and examined their computer database and slipped in a brief look at part of Kelyvn's butterfly collection.

Trevor Hawkeswood, a new member of our Society, has been honoured with the title of Fellow of the Linnean Society. Trevor, a prolific author, is well known among society members for his papers on butterflies, beetles, and his studies on insect pollination.

David Holmes of Dromana is busy with a winter emergence of Imperial White butterflies. He has been occupied with making more display boxes of late. *Kelyvn* and *Jody* visited David and *Joyce* to have a look at the Northern Territory skipper butterflies in David's collection. David also showed *Jody* his exotic birdwing and eggfly specimens.

Hugh Bollam of Perth has once again made his annual winter pilgrimage to to the north-west and during July investigated Witternoon and the Hamersley Range in the Pilbara region.

Our congratulations to *Max Moulds* of Sydney! Max's book *Australian Cicadas* recently won the prestigious Royal Zoological Society of New South Wales' Whitley Medal for the most outstanding book on Australian Zoology.

Our Public Officer, *David Crosby* was recently in contact with the CF&I, at Alexandra regarding the conservation of Mount Piper, the breeding site of the Victorian form of the rare Large ant-blue butterfly. According to David, the last remaining feral goat had now been shot. The goats had done considerable damage to the native vegetation near the summit in the last few years, but the significance of their presence on the ant-blue population is not known.

Weevil Taxonomist, *Bob Thompson*, and Buprestid beetle specialists *Gordon* and *Joy Burns* have been continuing their work on the collections of the Museum of Victoria and the Victorian Agricultural Insect and Arachnid Collection (now known as VAIAC), at PRI Burnley. *Ted Edwards* from the CSIRO Canberra was also at both the Museum of Victoria and VAIAC during June to examine the Noctuid moths and to locate unrecognised type specimens among the collections of Lepidoptera.



ON THE GRAPEVINE (continued)

The Australian Entomological Society conference at ANU Canberra was held during the first week of July. A number of ESV members braved Canberra's alpine climate and made their appearances, including *Tim New, Mali Malipatil, Ken Walker, Ross Field, Michael Braby, and Gordon & Joy Burns*. Of particular interest was the session on the contributions to Australian entomology by amateur entomologists; an attractive selection of some insect specimens collected by J.C. "Zoo" Le Souef and David Crosby were part of the magnificent display prepared by ANIC staff. Mali also reported that a photo of David Crosby was displayed with other prominent collectors at ANIC in acknowledgement for the contribution of his Australian butterfly collection recently received.

Congratulations to *Mark Hunting* our President on the announcement of his engagement to Brenda Wilson of Springvale. Mark and Brenda plan to wed on the 8th December of this year.



LETTER TO THE EDITOR:

Norma Harrison
3 Gina Court
Shepparton Vic 3630

Ref: *Polyura pyrrhus sempronius*

Was interested to read Ian Faithfull's article (*Vic. Ent.* 20(2): 56, 1990) on the above.

On 3rd April 1990, a warm sunny day, a *Polyura pyrrhus sempronius* was captured by me in the fernery on underside of the shade cloth. It is in good order, not battered. It is the only one I have seen down this way since the floods of the mid 1970's when I was still living at Stanhope on the farm. That specimen was travelling very fast in a SSW direction. Maybe it is the floods in NSW and Qld that set them in a southbound flight.

(signed) Norma Harrison

VIC. ENT. TRIVIA .

by Jody Dunn

For the amusement of readers, I have put together this short quiz to see how well you read your *Victorian Entomologist*. Some questions you may be able to answer straight away, some may take a little longer and others may have slipped your mind entirely! Have a go and see what quality *Vic. Ent.* reader you really are.

- Q 1. Buprestid taxonomist, Shelley Barker named a *Stigmodera* after Gordon Burns. What did he name it?
- February 1989 edition
- Q 2. Someone managed to find *Hypochrysoys delicia* colonies in the Gresswell Forest and on Gresswell Hill. Who was this member?
- April 1988 edition
- Q.3 Which two members observed the ovipositing behaviour of *Hesperilla malindeva* at Maaroom, south-eastern Queensland?
- June 1988 edition
- Q.4 What award did Tim New receive in 1988?
- June 1988 edition
- Q.5 From which state did John Burns report an alleged sighting of *Graphium sarpedon choredon*?
- August 1988 edition
- Q.6 Which radio station did Fabian Douglas appear on when he discussed the LCC Mallee report and his own principal studies of the buprestids and butterflies of the Victorian Deserts?
- December 1988 edition
- Q.7 Where was the Queensland insect collector Martin Joseph Manski born?
- February 1989 edition
- Q.8 Which interstate member reared various skippers including *Sumiatas* from along the Mary River, Maryborough, south-eastern Queensland?
- February 1989 edition
- Q.9 This Victorian member took up studies at James Cook University, Townsville, northern Queensland in 1989.
- February 1989 edition
- Q.10 What does the word *Pomona* (technical name of the lemon migrant butterfly) mean in ancient mythology?
- December 1988 edition

- Q.11 Who re-discovered the letimus Blue butterfly near Melbourne?
- April 1989 edition
- Q.12 Whose letter appeared recently in the Vic. Ent.?
- April 1989 edition
- Q.13 Who illustrated a pie dish beetle found in the Big Desert?
- April 1989 edition

How did you score?

- | | |
|----------------|--|
| 0 - 9 points | - you merely note when the <i>Vic. Ent.</i> has been published! |
| 6 - 15 points | - you read most articles! |
| 16 - 25 points | - you read the <i>whole</i> magazine! |
| 26 - 39 points | - you obviously don't read much else other than the <i>Vic. Ent.</i> because you seem to remember all the trivial! |

ANSWERS

- | | | |
|------|-----------------------------|----------|
| Q.1 | <i>gordonbunsi</i> | 1 point |
| Q.2 | Michael Braby | 1 point |
| Q.3 | Kelvyn Dunn and Ray Manskie | 3 points |
| Q.4 | Mackerras Medal | 1 point |
| Q.5 | Victoria | 5 points |
| Q.6 | 3RRR | 5 points |
| Q.7 | Maryborough, Queensland | 3 points |
| Q.8 | Ray Manskie | 5 points |
| Q.9 | Michael Braby | 1 point |
| Q.10 | The goddess of fruit trees | 5 points |
| Q.11 | John Burns | 3 points |
| Q.12 | Ted Edwards | 1 point |
| Q.13 | Ian Faithful | 5 points |

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CONTRIBUTIONS TO THE VICTORIAN ENTOMOLOGIST

The Society welcomes contributions of articles, papers or notes pertaining to any aspect of entomology for publication in this Bulletin. Contributions are not restricted to members but are invited from all who have an interest. Material submitted should be responsible and original. Statements and opinions expressed are the responsibility of the respective authors and do not necessarily reflect the policies of the Society.

Contributions should preferably be typed on paper of A4 (International Quarto) size, one and a half spaced with triple spacing between paragraphs and a margin of 3 cm.

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DIARY OF COMING EVENTS

- Friday 17 August** - *Aquatic Insect Sampling*
by Dr. R. Mareham
- 21 September - Council Meeting
- 19 October** - General Meeting
Chrysomelid beetles by P. Kelly
- 16 November - Council Meeting
- 14 December** - General Meeting
Members night - members to bring
exhibits for discussion

Excursions

- Saturday 25 August** - D.R. Holmes Collection
- Sunday 11 November** - Heatlicote district

Scientific names contained in this document are *not* intended for permanent scientific record, and are not published for the purposes of nomenclature within the meaning of the *International Code of Zoological Nomenclature*, Article 8(b). Contributions are not refereed, and authors alone are responsible for the views expressed.

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